

## Supplementary Material

# Upregulation of Anti-Angiogenic miR-106b-3p Correlates Negatively with IGF-1 and Vascular Health Parameters in a Model of Subclinical Cardiovascular Disease: Study with Metformin Therapy

Sherin Bakhshab<sup>1,2,3</sup>, Josie O'Neill<sup>2,4</sup>, Rosie Barber<sup>2,4</sup>, Catherine Arden<sup>4</sup> and Jolanta U. Weaver<sup>2,5,6,\*</sup>

<sup>1</sup> Biochemistry Department, King Abdulaziz University, P.O. Box 80218, Jeddah 21589, Saudi Arabia; sbakhshab@kau.edu.sa (S.B.)

<sup>2</sup> Translational and Clinical Research Institute, Newcastle University, Newcastle upon Tyne NE2 4HH, UK; josieoneill@virginmedia.com (J.O.); rosie\_barber@icloud.com (R.B.); Jolanta.Weaver@newcastle.ac.uk (J.U.W)

<sup>3</sup> Center of Excellence in Genomic Medicine Research, King Abdulaziz University, Jeddah 2189, Saudi Arabia

<sup>4</sup> Biosciences Institute, Newcastle University, Newcastle upon Tyne NE2 4HH, UK; catherine.arden@newcastle.ac.uk (C.A.)

<sup>5</sup> Department of Diabetes, Queen Elizabeth Hospital, Gateshead, Newcastle Upon Tyne NE9 6SH, UK

<sup>6</sup> Vascular Biology and Medicine Theme, Newcastle University, Newcastle upon Tyne NE1 7RU, UK

\* Correspondence: Jolanta.Weaver@newcastle.ac.uk; Tel.: +44-191-445-2181

**Table S1.** The predicted consequential pairing of miR-106b-3p and transcript target regions.

Target gene	Representative transcript	Gene name	Transcript position	Predicted consequential pairing of target region. Transcript (top) and miRNA (bottom)	Site type
ADAMTS13	ENST00000371916.1	A disintegrin and metalloprotease with thrombospondin type 1 repeats 13	213-219 3' UTR	(transcript) 5' <b>GAGU</b> UCAUGUCGCAACAGUGC <b>GC</b> (miRNA) 3'CGUCGUUCAUGGGUGUCACGCC	7mer -m8
ADAMTS13	ENST00000371916.1	A disintegrin and metalloprotease with thrombospondin type 1 repeats 13	1165-1171 3' UTR	(transcript) 5'GCCUGCGGGAGCGGCCAGUGCG <b>C</b> (miRNA) 3'CGUCGUUCAUGGGUGUCACGCC	7mer -m8
ADAMTS13	ENST00000371916.1	A disintegrin and metalloprotease with thrombospondin type 1 repeats 13	2576-2582 3' UTR	(transcript) 5'GAGUUCUCUCAACUGCAGUGC <b>GG</b> (miRNA) 3'CGUCGUUCAUGGGUGUCACGCC	7mer -m8
GDNF	ENST00000326524.2	Glial cell derived neurotrophic factor	2049-2055 3' UTR	(transcript) 5'CUC <b>CAGCC</b> UAAGUGA--- <b>CAGUGCGG</b> (miRNA) 3'CGUCGUUCAUGGGUGUCACGCC	7mer -m8
GDNF	ENST00000326524.2	Glial cell derived neurotrophic factor	2601-2608 3' UTR	(transcript) 5'UUCAGAGAACCUUGGCAGUGC <b>GA</b> (miRNA) 3'CGUCGUUCAUGGGUGUCACGCC	8mer
PDGFA	ENST00000402802.3	Platelet derived growth factor subunit A	753-760 3' UTR	(transcript) 5'CUGUAACUGUCAGGACAGUGC <b>GA</b> (miRNA) 3'CGUCGUUCAUGGGUGUCACGCC	8mer
PDGFA	ENST00000354513.5	Platelet derived growth factor subunit A	777-784 3' UTR	(transcript) 5'CUGUAACUGUCAGGACAGUGC <b>GA</b> (miRNA) 3'CGUCGUUCAUGGGUGUCACGCC	8mer
PIK3CG	ENST00000359195.3	Phosphatidylinositol-3-kinase catalytic subunit gamma	25-31 3' UTR	(transcript) 5'CUAGAAUCAAAAACAAGUUAG <b>UG</b> (miRNA) 3'AGUGAACUUAGACG---- <b>UCAAUCAU</b>	7mer -m8
PIK3CG	ENST00000359195.3	Phosphatidylinositol-3-kinase catalytic subunit gamma	520-526 3' UTR	(transcript) 5'AAAGCAAGGAAAGCG- <b>AGUUAGUC</b> (miRNA) 3'AGUGAACUUAGACGUCAAUCA <b>U</b>	7mer -m8

Predictions of interaction sites between miR-106b-3p and the transcripts used the TargetScanHuman 8.0 ([https://www.targetscan.org/vert\\_80/](https://www.targetscan.org/vert_80/) accessed on 16 June 2023) and Diana-TarBase v8 (<https://dianalab.e-ce.uth.gr/html/diana/web/index.php?r=tarbasev8> accessed on 16 June 2023) databases. Predicted consequential pairing of miR-106b-3p and transcript target region are indicated by the nucleotides in bold.